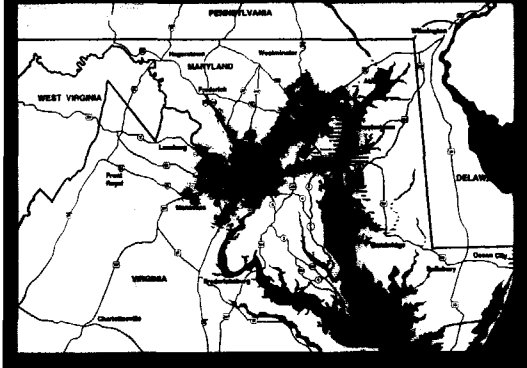
NOW IT S EASIER

is the first all-in-one personal phone, answering machine and pager that goes with you. When you are in the Sprint Spectrum service area, you can make calls to and receive calls from anywhere in the world. You'll enjoy crystal clear voice quality, total call privacy and better value than cellular phone systems.



- High quality coverage available now
- Variable coverage available now
- Additional coverage available during 1996

Striped areas indicate coverage over water

1-800-311-4220

Sprint Spectrum

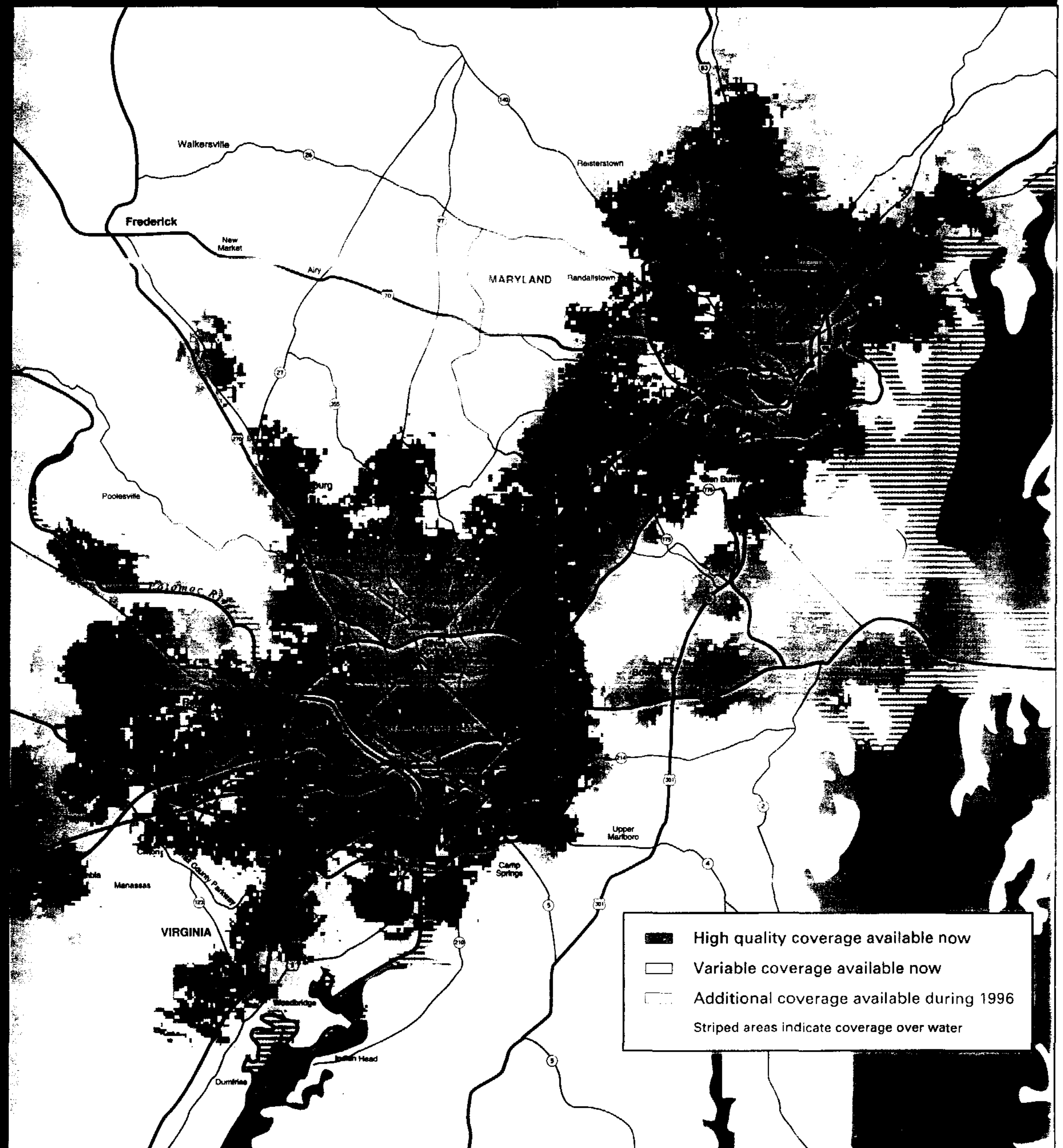
Sprint Spectrum

Sprint

Sprint Spectrum

the service area, you can make calls to and receive calls from anywhere in the world.

The Sprint Spectrum service, like all radio technology-based services (including TV and radio), can be affected by local conditions that may interfere with radio signals. This includes some wooded areas, hills and valleys. In some cases use of your Sprint Spectrum handset may



Appendix B

NYNEX
222 Bloomingdale Road, White Plains, NY 10605

NYNEX

Dear

In our efforts to improve our network interconnection services, I am pleased to announce the introduction of a new plan which will support competitive interconnection rates in New York. Effective September 1, 1995, we are implementing the interim compensation arrangement which will compensate you for New York IntraLATA NYNEX originating calls that terminate on your network. We are pleased that this plan is now being implemented and look forward to future plans that will increase our mutual business.

Please find attached, a comprehensive summary of the plan and our [illegible] compensation process. This information includes the applicable New York P.S.C. 900 tariff references, compensation criteria and specific billing data information. I will be pleased to work with you to clarify any questions regarding this information and our requirements.

In addition, in order to assist you in initiating billing, we would be willing to provide measurement information in support of this process for the first three months of the plan as required.

I believe that this is a positive step in continuing our mutually beneficial business relationship. If you have any questions or need clarification regarding this information, please call me on 914-644-4791.

Sincerely,

Paul A. D'Alessio
Account Manager

cc: J. Sullivan

September 1, 1995

To: All Cellular Carrier/SMR Customers of New York Telephone

Performance Regulation Plan (Overview of application to Type 2)

On August 18, 1995 the NY Public Service Commission (Commission) issued its final order approving the Performance Regulation Plan (Plan) for New York Telephone Company.

Section IV(D)(2) of the Plan requires the Company to implement rate reductions designed to achieve an average rate of 2.59 cents per minute for type 2 interconnection. Section V(C)(4) of the Plan provides that "[s]ubject to the outcome of Case 94-C-0095, the Company shall implement by tariff effective [September 1, 1995] an interim compensation arrangement for calls terminating on cellular networks. The interim rate for compensation shall be the same as charged for Type 2 interconnection." (Case 94-C-0095 is the ongoing "Competition II" proceeding.)

Type 2 Rate changes

Prior to the outcome of the Plan, the Company had filed tariff amendments (Case 95-C-0363), to reduce Type 2 rates to the level initially agreed to in the Plan and to eliminate mileage sensitivity for calls originating on the mobile carrier's network and terminating on the Company's network.

On June 29, 1995 the Commission approved PSC 900 Tariff amendments effective July 1, 1995, that reduce the Type 2 intraLATA Transport No. 1 rate to 2.59 cents per minute for all mileage bands. That filing was approved on a temporary basis subject to any further reductions in the Type 2 price target that might be ordered by the Commission in its final review of the Plan. The Commission ordered no such further reductions for Type 2 interconnection. The tariff amendment approved by the Commission on June 29, 1995 and in effect since July 1, 1995 automatically results in compliance with the 2.59 cents/minute price target set forth in the Plan.

Mutual Cellular Compensation

Effective September 1, 1995 the amendments to NYS PSC-900 Tariff Section 1 MM. 4b (2) (b) (pages 204,205) provide compensation to the Cellular Carrier on a per minute of use basis for all IntraLATA two-way mobile service calls originated on the Company's network by a Company end-user and terminated on the Cellular Carrier's network to the Carrier's end-user over Type 2 interconnection arrangements. Compensation will be paid at the same Type 2 Transport No. 1 rate level as the Carrier pays the Company and will be based on the aggregate monthly applicable Company originated intraLATA usage rounded to the next full minute.

PSC 900 Tariff Language

MM.4.b.(2)(b)

The Company shall pay the Carrier on a per minute of use (MOU) basis, for all intraLATA two-way mobile service calls originated on the Company's network by the Company's end-user and terminated on the Carrier's cellular network to the Carrier's end-users. The MOU rate paid by the Company to the Carrier shall be the rate set forth in paragraph 5.d following, or the customer specific price paid by the Carrier to the Company for like service, whichever is lower. The MOU rate paid by the Company shall be applied to the sum of all applicable Carrier terminated conversation minutes in the bill period rounded to the next full minute. The Carrier shall render the Company a monthly bill providing the call details of all calls for which the Carrier seeks payment from the Company. The Carrier shall retain and the Company shall have the right to review all Carrier records supporting the bill rendered to the Company for calls terminated on the Carriers network.

MM.4.b.(2)(c)

The Carrier shall develop sufficient call and bill detail, from which applicable Company originated usage can be determined. The Carrier shall maintain such information for a period of one year. Upon request from the Company or its authorized agent, Carrier shall make such call and bill detail records available for audit. The Carrier shall supply the data within 30 calendar days of the Company's request. Failure of the Carrier to demonstrate the accuracy and reasonableness of any bill rendered to the Company will entitle the Company to a refund or credit of such amount.

Mutual Cellular Compensation will be provided by NYNEX-New York to the Carrier/SMR only for:

1. New York Telephone Company originated IntraLATA calls on...
2. Type 2 facilities used for...
3. two-way mobile service at...
4. the same Type 2 Transport No. 1 rate paid by the Carrier to the Company.

5. NYNEX-New York will not make compensation for calls that do not originate on its network. i.e. calls originated from an IXC, Independent Telco, CLEC or another cellular or wireless carrier.

6. No compensation will be made for paging services or for calls terminated over Type 1 facilities.

7. Attachment "A" is a diagram of a generic Type 2 transported call and the rate/charge responsibilities of each of the parties

Cellular Carrier Requirements:

1. With the help of Account Management, establish a Payment Information Record and a Billing Record (See Attachment "B") and submit it to the NYNEX-New York Cellular Administrator.

2. Establish a system to accurately measure NYT originated IntraLATA calls for which compensation is owed.
Out of band signaling or separate trunk groups may need to be established for this purpose. NYNEX-New York will provide assistance to the extent that it can to establish this measurement system. Should the Carrier desire, NYNEX-New York will make its own measurements and make them available to the Carrier for the purpose of their compensation calculation. NYNEX-New York would agree to perform this measurement on behalf of the Carrier at no charge for the first three months of the plan. (September through November 1995)

3. Submit a monthly bill for compensation payment to:

   NYNEX-New York
   Cellular Administrator
   Room 1010C
   158 State Street
   Albany, New York 12207

4. Include sufficient call and bill detail to support the monthly bill.

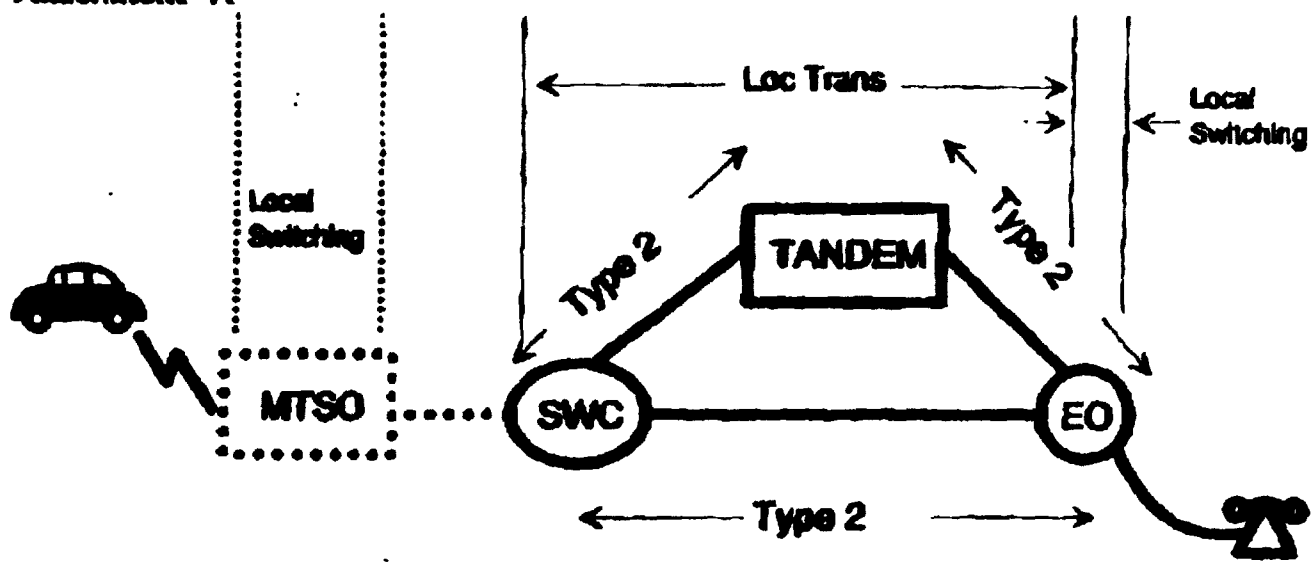
   - **Identify Billing Period (Month)**
   - **Amount of Bill by account/LATA**
   - **Aggregate Minutes by account/LATA**

5. Maintain billing detail records for a minimum of one year.

6. Be prepared to demonstrate the reasonableness of the rendered bill should it differ from the Company's own measurement records.

7. Make call and billing detail available for audit.

Attachment "A"



Call Type	Option	Landline Car Pays	NYNEX Pays/Revs	Mobile Car Pays	Carrier Pays/Revs
Land to Mobile	Transport 1	Local or Toll	Mutual Compensation/ Local or Toll Revenues	Air Time	$0/ Air Time+Mutual Comp.
	Transport 2	Local	Mutual Compensation/ Local+Transport 2 Rev.	Air Time	Transport 2 Rates/ Air Time+ Mutual Comp.
Mobile to Land		$0	$0/ Type 2 Revenues	Air Time	Type 2 Rates/ Air Time

Cellular Reciprocal Billing

Required Invoice Information

Bill Type Statement	Cellular / SMR Terminating Switched Access
Invoice Number	Unique to the company and month
Bill Date	Date invoice is prepared
Payment Due By	30 days after Bill Date with Saturday, Sunday and Holiday consideration
Usage Dates	From mm/dd/yy To mm/dd/yy
Cellular Company Name, Address, City, ZIP Code	Bill issuing company's return address
Contact Name	Bill-issuing person's name to call in case of questions
Contact Telephone Number and Ext.	Bill-issuing person's tel. number
Customer Account Code system (if applicable)	NYNEX's account identifier in the Cellular billing
Minute quantity by LATA	Usage (billable units) listed by LATA. Most companies will have data for only one LATA
Access Rate	The rate applied to usage to develop charges (currently $.0259)
Charge by LATA	The produce of Usage by LATA * Access Rate
Total Access Charge	The sum of charges by LATA
Other Charges and Credits	Adjustments to prior period billing - support workpapers may be requested
Invoice Total	The final amount due to the supplier from NYNEX

Cellular Reciprocal Billing
MAPS-90 Supplier Table Required Data Information

Company Name

Street Address

City

State

ZIP Code

Federal Tax ID

Payment Method (select one only):

Check:

Remittance Street Address

Remittance City, State, Zip

Contact Name

Contact Tel Number

Wire Transfer:

Wire Transfer institution

Account Number

ABA Number

Institution Address

Institution City, State, Zip

Contact Name

Contact Number

Appendix C

Appendix B

AFFIDAVIT OF VIC JACKSON
CONCERNING EXISTING LEC/PAGING CARRIER
INTERCONNECTION AGREEMENTS

1. I, Vic Jackson, am employed as Director of Interconnection with Paging Network, Inc. ("PageNet").

2. In that capacity, I am responsible for all issues for PageNet subsidiaries that deal with the terms and conditions under which the paging facilities of those subsidiaries are interconnected with the public switched telephone network. I have negotiated interconnection terms and conditions with all of the Bell Operating Companies, and many of the largest independent local exchange carriers ("LECs") and interexchange carriers.

3. It is my belief that the negotiated process that has led to the CMRS interconnection arrangements that currently are in effect is highly disadvantageous to paging carriers and other CMRS providers, which have no bargaining leverage with the LECs.

4. As a result of this inferior negotiating position, PageNet has had to accept interconnection arrangements that: A) are excessively priced, B) allow LECs to receive double -- and sometimes triple -- compensation for the same facilities, and C) unreasonably discriminate against paging carriers.

5. The unreasonable and discriminatory nature of these interconnection agreements is summarized in the spreadsheets that are attached to this Affidavit. Briefly, these spreadsheets show the following:

-- LEC pricing practices for the tandem/MTSO link vary from LEC to LEC and reflect no rational pattern:
  * New York Telephone provides the link at no charge, and Ameritech has proposed to do the same
  * the majority of LECs impose a monthly flat rate
  * several LECs impose a monthly rate and a per-minute of use rate for local exchange services -- these charges range from $.002 to $.0142
  * as discussed in these comments, any charge imposed for sending local exchange traffic over this facility is unreasonable, because the LECs already are fully compensated for this segment by the originating end user

-- To date, no LEC has agreed to compensate PageNet for the costs it incurs in terminating traffic that originates on the LEC network

-- A number of LECs have refused to provide to PageNet the same interconnection rates and/or terms that they provide to cellular carriers.

-- LEC rates for activating NXX codes vary from $0 to $29,000.

6. These pricing practices, and others identified in the attached spreadsheets, impose excessive costs on PageNet and unreasonably discriminate against paging carriers. As such, they are profoundly anticompetitive.

7. I swear under oath that the information contained herein, and the discussion of such information that appears in the attached Comments of Paging Network Inc., are true and correct to the best of my knowledge, information and belief.

Vic Jackson

Sworn before me this 1st day of March 1996

Janet L. Barrett
Public Notary

This 5 page report was prepared by Paging Network, Inc.

Summary of current paging interconnection as of March 1, 1996.

A. Paging interconnection currently consists of type 1 (End Office), and type 2A (Tandem) connections.
Type 2B (High volume,single end office connection) is not currently economically viable for paging.
Currently, both type 1 and type 2 interconnection use MF trunk signaling over DS-1 facilities almost exclusively.

B. Paging carriers currently do NOT receive compensation for terminating traffic from any local exchange carrier.
In all cases, paging carriers must pay the local exchange carrier to receive calls to paging numbers.

C. Nynex in New York is currently compensating cellular carriers (but NOT paging carriers)
for terminating calls from the local exchange.

D. Nynex, Bell Atlantic, Pacific Bell, US West, GTE, Sprint/MAT, SNET and other independents
will NOT provide the same interconnection to paging carriers as that provided to cellular carriers.

E. All RBOC's offer some form of Type 2A (tandem) interconnection for both local and LATA wide calling.
In most cases, callers are charged the local flat or measured rate for calls to paging numbers.

F. The paging carrier pays a measured usage charge for type 2 calls originating outside the local exchange area.
(And in some cases, within the local exchange area.)

G. Except in New York, paging carriers must pay monthly trunk charges to be able to receive paging call traffic.

H. Paging carriers have to pay the local exchange carrier for activating NXX codes everywhere except New York and the Ameritech states.
NXX charges vary from approximately $2000 to $30,000 for activating each NXX code.

I. GTE, Sprint/MAT and other independent local exchange carriers have proposed or are currently charging paging carriers
a measured rate usage charge as well as trunk and other charges for local exchange calls that are terminated on paging numbers.

J. All local exchange carriers have proposed charges for CCS/SS7 signaling.
These charges are not based on mutual compensation principles and can include data circuits, STP port charges and usage.

K. Paging "dedicated" NXX codes are assigned "for use" by paging carriers but are shown in the Local Exchange Routing Guide (LERG)
as "paging" NXX codes with the Operating Company Number (OCN) of the wireline Local Exchange Company.
The LEC's have also refused to publish routing, rate centers and locality descriptions sought by paging carriers.

L. Bellcore charges a copyright fee for assignment of Common Language Location Identifier (CLLI) codes
needed for establishing a network switch location. In addition, the LEC's and Bellcore have refused to publish in the LERG,
duly assigned CLLI codes of paging switches.

Paging Network, Inc. 3/01/96			
Prices listed are averages of price ranges taken from published or proposed tariffs and agreements			
	NYNEX	AMERITECH	SOUTHWESTERN BELL
Refer to Notes listed below by number	Notes 1,4,9,10,13	Notes 1,3,5,6,11,12	Notes 1,3
	NY	OH,IL,WI,MI,IN	TX,OK,MO
Type 1 Trunks (DS-1) (0 mi)	0	$125	$100
Type 1 Numbers (100 Block)	0	$8.00	$8.50
Type 2 Trunks (DS-1)(0 mi)	0	$125 (Note 16)	$930
Type 2 Local (Usage/Min)	0	0 (Note 15)	0
Type 2 LATA-wide (Usage/Min)	0	$0.022/min	$0.045/min
SS7 (A link pairs, 10 mi)	Not offered	See note 16	Not offered
SS7 Usage	Not offered	See note 16	Not offered
NXX Code Establishment Charge	No chgs for NXX's	Chgs for NXX's being eliminated	$6400/NXX

Notes:

1. LATA-wide calling is defined as Land-to-Mobile calls from this LEC's end offices only.
2. Currently only Type 1 interconnection is available from this local exchange carrier.
3. Charges are made to the paging carrier for both local and LATA calls delivered to paging carriers.
4. This LEC will NOT offer Paging Carriers the same interconnection terms as Cellular Carriers.
   The Cellular interconnection is more favorable and less costly than that offered to Paging Carriers.
5. This LEC charges callers the local measured rate in additon to charging the paging carrier the Type 2 measured rate.
6. Interconnection negotiations for revised paging interconnection are currently underway with this LEC.
7. Trunk connections to both a "local" tandem and a "toll" tandem required.
8. Callers are not charged any local measured rate for Type 2 calls
9. This LEC charges callers the local measured rate for all type 2 calls delivered to paging carriers.
10. There is no charge to the paging carrier for type 2 trunks.
11. Billing option 1 charges the paging carrier the land-to-mobile access rate. (approx. $0.045/minute)
12. Billing option 2 charges the caller the local measured rate for paging calls.
13. Compensation of $0.0259/minute is paid for cellular land-to-mobile calls. This compensation is not available to paging carriers.
14. This LEC is demanding that new interconnection agreements include charges to the paging carrier
    for both local and LATA calls delivered to paging carriers.
15. Ameritech has proposed paying the access terminating switching rate (approx. $006/min) for all calls terminated to CMRS carriers.
16. Ameritech has proposed delivering all local exchange traffic to CMRS carriers at no charge to the CMRS carrier.

Paging Network, Inc. 3/01/96			
Prices listed are averages of price ranges taken from published or proposed tariffs and agreements			
	BELLSOUTH	US WEST	PACIFIC BELL
Refer to Notes listed below by number	Notes 1,3,8	Notes 1,3,4,7	Notes 1,3,4,5,6
	FL,NC,SC,GA,LA,AL	AZ,OR,WA,MN,CO	CA
Type 1 Trunks (DS-1) (0 mi)	$500	$375	$250
Type 1 Numbers (100 Block)	$0.50	$15	$0.50
Type 2 Trunks (DS-1)(0 mi)	$500	$375	$250
Type 2 Local (Usage/Min)	0	0	$0.01/call
Type 2 LATA-wide (Usage/Min)	$0.077/min	$0.09/min	$0.01/call
SS7 (A link pairs, 10 mi)	$934	Not offered	Not offered
SS7 Usage	$500	Not offered	Not offered
NXX Code Establishment Charge	$2900/NXX	$8700/NXX	$15,000 to $30,500/NXX

Notes:

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Paging Network, Inc. 3/01/96			
Prices listed are averages of price ranges taken from published or proposed tariffs and agreements			
	BELL ATLANTIC	NET	SNET
Refer to Notes listed below by number	Notes 1,3,4,5,6	Notes 1,4,9	Notes 1,3,4,6,7
	MD,VA,PA,WV,NJ	MA	CN
Type 1 Trunks (DS-1) (0 mi)	$125	$150	$150
Type 1 Numbers (100 Block)	$14.00	Not listed	$52.00
Type 2 Trunks (DS-1)(0 mi)	$125	$150	$150
Type 2 Local (Usage/Min)	$0.00	$0.002/min	$0.0142/min for both type 1 and type 2
Type 2 LATA-wide (Usage/Min)	$0.01/Call + $0.012/min	$0.002/min	$0.06/min
SS7 (A link pairs, 10 mi)	Rate not specified	Not offered	Not offered
SS7 Usage	Rate not specified	Not offered	Not offered
NXX Code Establishment Charge	$4500/NXX	$6,000	$5,000

Notes:

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16. Ameritech has proposed delivering all local exchange traffic to CMRS carriers at no charge to the CMRS carrier.

Paging Network, Inc. 3/01/96			
Prices listed are averages of price ranges taken from published or proposed tariffs and agreements			
	GTE	SPRINT/MID ATLANTIC TELECOMM	SPRINT/CENTEL
Refer to Notes listed below by number	Notes 1,3,4,6,14	Notes 1,2,3,4,6,14	Notes 1,2,4
	CA,FL,OH,OR,WA	NC	NV
Type 1 Trunks (DS-1) (0 mi)	$125	$150	$125
Type 1 Numbers (100 Block)	$13.00	$24.00	$24.00
Type 2 Trunks (DS-1)(0 mi)	$125	$150	Not offered
Type 2 Local (Usage/Min)	$0.005/min	0	Not offered
Type 2 LATA-wide (Usage/Min)	$0.035/min	$0.12/min	Not offered
SS7 (A link pairs, 10 mi)	Rate not specified	Not offered	Not offered
SS7 Usage	Rate not specified	Not offered	Not offered
NXX Code Establishment Charge	$4,600	$2,680	$2,680

Notes:

1. LATA-wide calling is defined as Land-to-Mobile calls from this LEC's end offices only.
2. Currently only Type 1 interconnection is available from this local exchange carrier.
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   The Cellular interconnection is more favorable and less costly than that offered to Paging Carriers.
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16. Ameritech has proposed delivering all local exchange traffic to CMRS carriers at no charge to the CMRS carrier.

Appendix D

Jubon Engineering, P. C.

3816 Winters Hill Drive
Atlanta, Georgia 30360-1331
Telephone: 770-828-0120 Fax: 770-828-0108

AFFIDAVIT

County of DeKalb)
) ss:
State of Georgia)

Jan David Jubon, being first duly sworn, says ...

... that he is a professional engineer registered and/or licensed in Georgia, the District of Columbia, and six other states to practice electrical engineering;

... that he has been continuously employed in the field of telecommunications as an engineer or engaged in the practice of telecommunications related electrical engineering since 1968;

... that his credentials are a matter of record with the Federal Communications Commission (FCC) in Washington, D.C.;

... that the attached "Technical Memorandum" dated 28 February 1996, addressed to PageNet and concerning certain matters in FCC Docket 95-185, was prepared by him;

... that the "Technical Memorandum" was prepared at the request of PageNet;

... that he is familiar with the material contained within the aforementioned "Technical Memorandum"; and

... that the professional opinions and conclusions expressed in the attached "Technical Memorandum" are true and correct by his personal knowledge, and are freely given without duress.

by: Jan David Jubon, P.E.

Subscribed to and sworn before me this First day of March 1996.

Notary Public
(SEAL)

Jubon Engineering, P. C.

3816 Winters Hill Drive
Atlanta, Georgia 30360-1331
Telephone: 770-828-0120 Fax: 770-828-0108

TECHNICAL M E M O R A N D U M:

To: PageNet

Dated: 28 February 1996

From: Jan David Jubon, P. E.

Re: FCC Docket 95-185 - Mutual/terminating compensation for paging carriers; Discussion of adverse allegations to: Paging is an exchange service, Paging switches are end offices, PSTN and paging traffic terminate identically

Introduction[1] :

Since the issuance of the Second Report and Order in FCC Docket 93-252[2], a number of incumbent wireline telephone companies[3] have adamantly maintained that wireless paging service providers are not entitled to compensation for the traffic which they terminate from other carriers in the PSTN. Some of the justifications include representations that paging carriers do not provide public telecommunications exchange services, statements that neither paging carriers nor paging carriers' "paging terminals" provide switching services. and claims that paging messages terminate at the provider's "paging terminal", not with the paging provider's end users.

These assertions are simply wrong. Some background is appropriate to demonstrate how incorrect such statements really are.

---

[1] The material presented in this "Technical Memorandum" addresses several of the issues under consideration in FCC Docket 95-185 as regard FCC licensed CMRS paging carriers. The material was originally prepared on behalf of an ad-hoc consortium of PageNet and other paging carriers. Various portions were presented as components of pre-filed direct and rebuttal testimony in a local regulatory proceeding during mid 1995. The original "Q and A" format and several component parts have been edited to provide a more report-like presentation.

[2] 9 FCC Rcd 1411 (1994)

[3] ... and a number of state regulators as well ...

Paging as an exchange service:

From the "beginning", common carrier paging[4] has been provided as a public, FCC licensed, common carrier, exchange level service. Private carrier paging and two-way services[5] have more recently been combined with common carrier paging and two-way services under the aegis of Commercial Mobile Radio Service (CMRS)[6]. In this same action which created the CMRS, the Commission strongly re-stated that CMRS paging and the other CMRS services were, indeed, public exchange telecommunications services.

Wireless/CMRS local service providers[7], competitive wireline local service providers, incumbent I-LECs, and the RBOC LECs all offer local exchange services which, except for loop technology are generically interchangeable. Accordingly, no wireless-wireline-incumbent-telco differentiation should exist in the rate or compensation structures utilized between these local service providers. Terminating compensation rate structures should be specified for end office switching, local transport, transport termination functions, and direct trunked and tandem switched transport in a manner similar, but not necessarily identical to FCC prescriptions for access services. Any appropriately interconnected wireless carrier[8] is entitled to per call, call duration, and provided-transport-distance based compensation for traffic terminated by that carrier regardless of the character of the traffic.

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4 47 CFR Part 22

5 47 CFR Part 90

6 9 FCC Rcd 1411 (1994)

7 Wireless/CMRS providers include paging carriers, cellular carriers, SMR/ESMR providers, PCS providers, and conventional two-way providers.

8 Actually, any exchange service provider connected in the traditional heirarchal network configuration.

PageNet is referred to Counsel for a more exhaustive summary of the regulatory citations and precedents establishing and justifying exchange service provider status for CMRS paging services.

Paging switchgear performs true PSTN end office switching functionality:

A very brief history of paging services and switchgear provides a springboard for understanding how allegations as to end office functionality might surface.

Many years ago, paging "terminals" were terribly simplistic devices which essentially automatically answered a single party telephone line served from a telephone company end office. The line was answered any time it rang. The caller generally then transmitted the identity of the desired paging customer by dialing "end-to-end" on the answered circuit using DTMF/(TouchTone®) signals. With the use of "end-to-end" dialing, calls were considered complete when the paging terminal answered the line. Later systems began to employ the then newly available DID capabilities offered by telephone companies to identify the called pager. In both cases, a caller's dialed digits were translated into an elementary, encoded alerting signal causing a beep, or beep with the caller's voice message to be transmitted by the paging radio base station. In many cases, the paging equipment did not even check for dialed digit validity. Such is not at all the case with today's paging switchgear.

Paging call control and switching has evolved to the point that a single paging switching system may control calls to tens or even hundreds of thousands of customers using any one of tens to hundreds of independent service regions and radio channels. Customers in any service region and on any radio channel may be addressed through any PSTN-connecting trunk group. Customers may even interact with the paging switch to enable/disable advanced user features and vertical services so that calls are completed to the customer's choice of functions and services, including the forwarding of calls to other PSTN addresses.

Because of the complexity of the switching and network services provided by current paging switches, SS#7 interfaces with the PSTN are being perfected by several vendors, DS-1 interface with the PSTN is the norm for many modest to large operators, and advanced call and digital message forwarding techniques are commonplace. Most

important, however, is that as noted above, each paging receiver/user is uniquely identified by its own, individual world telephone number[9] which allows that pager's end user, on whatever radio channel(s) and within whatever service region(s) the end user equipment operates, or via other paging switch-based vertical services, to be individually addressed and communicated with through the paging switching machine.

Claims that a state of the art paging "terminal" is not a "switching machine" in the PSTN are countered by the following citations from what are normally regarded as fairly reliable sources ...

One definition for "switching" is provided by Bell Telephone Laboratories in its text *Engineering and Operations in the Bell System*, (1977), at page 690, as being "... the process of connecting together appropriate lines and trunks to form a desired communications path between two station sets [subscriber units]. Included are all kinds of related functions such as sending and receiving signals, monitoring the status of circuits, translating addresses to routing instructions, alternate routing, testing circuits for busy condition, and detecting and recording troubles". All of PageNet's paging switchgear provides functionality which conforms to this definition.

A more recent summary definition of network end office functionality may be drawn from Bellcore's *BOC Notes on the LEC Networks - 1994*, SR-TSV-002275, Issue 2, April 1994 at section 4.1.3.1. It states ...

> End office switching systems provide access to the Message Telecommunications Service (MTS) network. A ... user can originate **or** receive communications to **or** from the network via an end office. [emphasis added]

Further, it can be demonstrated that paging switchgear, and more particularly PageNet's switches, meets the relevant and necessary technical and operational specifications for network end office functionality as published in *Notes ... - 1994*, Section 6, and in Bellcore's extensive document/specification *LATA Switching Systems Generic Requirements (LSSGR)*, FR-NWT-000064.

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[9] In a limited number of instances, advanced, but still comparatively inefficient forms of end-to-end signaling are employed to conserve numbering resources, notably with 800/888 toll free pager addresses.